

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. - 85. (Cancelled)

86. (Previously Presented) A method for preventing a respiratory syncytial virus (RSV)-induced disease, comprising administering to a patient a high affinity neutralizing immunoglobulin that specifically binds to a RSV F antigen with an affinity constant (K_a) of at least $10^{10} M^{-1}$ as measured by surface plasmon resonance, wherein the high affinity neutralizing immunoglobulin binds to the same epitope on the RSV F antigen as an antibody comprising a heavy chain variable region (VH) having an amino acid sequence SEQ ID NO:2 (Figure 1B) and a light chain variable region (VL) having the amino acid sequence SEQ ID NO:1 (Figure 1A).

87. (Previously Presented) A method for treating a respiratory syncytial virus-induced disease, comprising administering to a patient a high affinity neutralizing immunoglobulin that specifically binds to a RSV F antigen with a K_a of at least $10^{10} M^{-1}$ as measured by surface plasmon resonance, wherein the high affinity neutralizing immunoglobulin binds to the same epitope on the RSV F antigen as an antibody comprising a VH having the amino acid sequence SEQ ID NO:2 (Figure 1B) and a VL having an amino acid sequence SEQ ID NO:1 (Figure 1A).

88. (Previously Presented) The method of claims 86 or 87, wherein the immunoglobulin comprises one or more amino acid changes in one or more complementarity determining regions (CDRs) as compared to an existing antibody, wherein the existing antibody comprises:

a. a VL comprising the following CDR sequences:

VL CDR1 SASSSVGGMH (SEQ ID NO: 3),

VL CDR2 DT~~S~~KLAS (SEQ ID NO: 4), and

VL CDR3 FQGS~~G~~YPFT (SEQ ID NO 5); and

- b. a VH comprising the following CDR sequences:

VH CDR1 T~~S~~GMSVG (SEQ ID NO: 6),

VH CDR2 DIWWDDKKDYNPSLKS (SEQ ID NO: 7), and

VH CDR3 SMITN~~W~~YFDV (SEQ ID NO: 8),

and wherein one or more amino acid residue substitutions are made at the boxed positions, such that the amino acid substitutions have the effect of producing an increase in the K_a of the antibody.

89. (Previously Presented) The method of claims 86 or 87, wherein the immunoglobulin has a K_a of at least $10^{11} M^{-1}$.

90. (Previously Presented) The method of claim 88, wherein the immunoglobulin has a K_a of at least $10^{11} M^{-1}$.

91. (Previously Presented) The method of claim 86 or 87, wherein the immunoglobulin neutralizes RSV as measured by a microneutralization assay.

92. (Previously Presented) The method of claim 88, wherein the immunoglobulin neutralizes RSV as measured by a microneutralization assay.

93. (Previously Presented) The method of claim 89, wherein the immunoglobulin neutralizes RSV as measured by a microneutralization assay.

94. (Previously Presented) The method of claim 91, wherein the immunoglobulin has an IC_{50} in the microneutralization assay that is less than the IC_{50} of the IX-493 antibody.

95. (Previously Presented) The method of claim 92, wherein the immunoglobulin has an IC₅₀ in the microneutralization assay that is less than the IC₅₀ of the IX-493 antibody.

96. (Previously Presented) The method of claim 93, wherein the immunoglobulin has an IC₅₀ in the microneutralization assay that is less than the IC₅₀ of the IX-493 antibody.

97. (Previously Presented) The method of claim 86 or 87, wherein the immunoglobulin comprises:

- a. a VH CDR1 having the amino acid sequence TAGMSVG (SEQ ID NO:9);
- b. a VH CDR2 having the amino acid sequence DIWWDDKKDYNPSLKS (SEQ ID NO:7);
- c. a VH CDR3 having the amino acid sequence SMITNFYFDV (SEQ ID NO:11);
- d. a VL CDR1 having the amino acid sequence SASSSVGVMH (SEQ ID NO:3);
- e. a VL CDR2 having the amino acid sequence DTFKLAS (SEQ ID NO:12); and
- f. a VL CDR3 having the amino acid sequence FQGSFYPFT (SEQ ID NO: 14).

98. (Previously Presented) The method of claim 86 or 87, wherein the immunoglobulin is a tetrameric antibody, a Fab fragment, an F(ab)^{'2}, a heavy-light chain dimer, or a single chain structure.

99. (Previously Presented) The method of claim 86 or 87, wherein the immunoglobulin is a monoclonal antibody.

100. (Previously Presented) The method of claim 86 or 87, wherein the immunoglobulin is a humanized antibody.

101. (Currently Amended) The method of claim 97, wherein the immunoglobulin further comprises:

- (a) a framework region of a VL ~~domain~~ having the amino acid sequence of SEQ ID NO:1 and framework region of a VH ~~domain~~ having the amino acid of SEQ ID NO:2;
- (b) a framework region of a VL ~~domain~~ having the amino acid sequence of SEQ ID NO:17 and framework region of a VH ~~domain~~ having the amino acid of SEQ ID NO:18;
- (c) a framework region of a VL ~~domain~~ having the amino acid sequence of SEQ ID NO:19 and framework region of a VH ~~domain~~ having the amino acid of SEQ ID NO:20;
- (d) a framework region of a VL ~~domain~~ having the amino acid sequence of SEQ ID NO:21 and framework region of a VH ~~domain~~ having the amino acid of SEQ ID NO:22;
- (e) a framework region of a VL ~~domain~~ having the amino acid sequence of SEQ ID NO:23 and framework region of a VH ~~domain~~ having the amino acid of SEQ ID NO:24; or
- (f) a framework region of a VL ~~domain~~ having the amino acid sequence of SEQ ID NO:25 and framework region of a VH ~~domain~~ having the amino acid of SEQ ID NO:26.

102. (Previously Presented) The method of claim 86 or 87, wherein the immunoglobulin comprises a light chain variable region having the amino acid sequence of SEQ ID NO:23 and a heavy chain variable region having the amino acid sequence of SEQ ID NO:24.

103. (Previously Presented) The method of claim 86 or 87, wherein the patient is a human.
104. (Previously Presented) The method of claim 88, wherein the patient is a human.
105. (Previously Presented) The method of claim 89, wherein the patient is a human.
106. (Previously Presented) The method of claim 91, wherein the patient is a human.
107. (Previously Presented) The method of claim 93, wherein the patient is a human.
108. (Previously Presented) The method of claim 90, wherein the patient is a human.
109. (Previously Presented) The method of claim 92, wherein the patient is a human.
110. (Previously Presented) The method of claim 90, wherein the immunoglobulin neutralizes RSV as measured by a microneutralization assay.
111. (Previously Presented) The method of claim 110, wherein the patient is a human.
112. (New) The method of claim 88, wherein the immunoglobulin is a monoclonal antibody.
113. (New) The method of claim 88, wherein the immunoglobulin further comprises:
 - (a) a framework region of a VL having the amino acid sequence of SEQ ID NO:1 and framework region of a VH having the amino acid of SEQ ID NO:2;
 - (b) a framework region of a VL having the amino acid sequence of SEQ ID NO:17 and framework region of a VH having the amino acid of SEQ ID NO:18;
 - (c) a framework region of a VL having the amino acid sequence of SEQ ID NO:19 and framework region of a VH having the amino acid of SEQ ID NO:20;
 - (d) a framework region of a VL having the amino acid sequence of SEQ ID NO:21 and framework region of a VH having the amino acid of SEQ ID NO:22;

- (e) a framework region of a VL having the amino acid sequence of SEQ ID NO:23 and framework region of a VH having the amino acid of SEQ ID NO:24; or
 - (f) a framework region of a VL having the amino acid sequence of SEQ ID NO:25 and framework region of a VH having the amino acid of SEQ ID NO:26.
114. (New) The method of claim 86 or 87, wherein the K_a is 10^{10} .
115. (New) The method of claim 88, wherein the K_a is 10^{10} .
116. (New) The method of claim 86 or 87, wherein the K_a is 10^{11} .
117. (New) The method of claim 88, wherein the K_a is 10^{11} .